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Amendment
Attorney Docket No. S63.2N-6259-US03

Remarks

Claims 2 and 4-18 are currently pending in the application. Claims 4, 10, 11 and 16 have been amended into independent form, including the limitations of the claims from which they previously depended. Claims 2 and 9 have been amended to depend from claim 4 rather than cancelled claim 1.

Claim 8 has been amended for grammatical reasons. No change in scope has been made.

New claim 17 is based on original claim 2, but now depending from claim 10. New claim 18 corresponds to original claim 10, but with the inflation pressure minimum removed as unnecessary to patentability. No new matter has been added.

Claim Rejections - 35 USC §102

Claims 1, 2 and 9 have been rejected as anticipated by Sahatjian et al, US 5,306,246. Claim 1, has been cancelled and claims 2 and 9 have been amended to depend from claim 4, which has been indicated to be allowable. Therefore the grounds for this rejection are seen to have been removed.

Claims 1-3 and 9 have been rejected as anticipated by Reinhardt, US 5,833,657. Claims 1 and 3 have been cancelled and claims 2 and 9 have been amended to depend from claim 4, which has been indicated to be allowable. Therefore the grounds for this rejection are seen to have been removed.

The Office Action states that claims 1, 2, 4 and 9 are rejected as anticipated by Anderson, US 5,500,180. With regard to claim 1, it has been cancelled so the rejection is seen to be moot.

Inclusion of claim 4 is seen to be a clerical error, as Anderson says nothing regarding a PEN polymer and elsewhere in the Office Action (item 7 of Office Action Summary and page 3 of the Office Action), claim 4 has been indicated to be allowable if rewritten. If inclusion of claim 4 in the anticipation rejection on Anderson is not a clerical error, it is requested that a corrected Office Action be issued, in non-final form, so that applicant has a proper opportunity to respond to the rejection.

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The amendments of claims 2 and 9 to depend from allowable claim 4 are seen to remove the grounds for rejection of these claims.

Claim Rejections - 35 USC §103

Claim 10 has been rejected as obvious from Anderson. The Office Action states that Anderson teaches balloons with distensibilities of 5-20% and that distensibility can be modified by alteration of a hard segment to soft segment ratio. The Examiner concludes that Anderson's range is close to Anderson's range and so could also be obtained by obvious modification of Anderson's method. The applicant disagrees.

Applicant's claim 10 is directed to a larger pressure range than is used by Anderson. Anderson measures distensibility only from nominal to 10 bars (about 10 atm) (col. 3, ln 64 - col. 4, line 9). Anderson's nominal diameter, moreover, is typically in the range of 5-8 atm (col.10, lines 4-9). Therefore Anderson's distensibility is only measured over a maximum 5 atm range. The range may be as low as 2 atm if the nominal diameter is taken at 8 atm. Applicant's claim starts lower (4 atm) and runs all the way to burst, not just to 10 atm.

Looking at Anderson's examples, it can be seen that the least distensible balloon described is the PET balloon used for comparison in Example 6. For the balloon distensibility is reported to be 3.28%. Burst pressure of the PET balloon is not given, but comparison of tensile strength at burst (62,081 psi) of the PET balloon with the tensile wall strengths and burst pressures of balloons of the Anderson invention (14,000-25,000 psi, 13-22 atm, respectively, see Example 4), indicates that the burst pressure of the PET balloons was likely well above 22 atm. Therefore the maximum pressure range that the Anderson PET distensibility pertains to is less than 30% of the range over which applicant's claim 10 would measure radial expansion of this balloon.

Assuming substantially linear behaviour over a range of 4-22 atm, the radial expansion calculated by applicant's claim 10 method would be about 12%. This is a conservative estimate. The PET balloon very likely burst at higher than 22 atm, and polymer yielding may well have occurred shortly before burst, both of which would have increased distension to burst. Also, for the PET data, Anderson may well have used a nominal diameter taken at a pressure above 5 atm (see Anderson col. 4 lines 10-14 and Levy US RE 32,983, col. 3, lines 13-20 where the 75-100 psi converts to 5.1-6.8 atm). If so, the fractional portion of applicant's radial expansion range

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that is represented by Anderson's "distensibility" data would be further reduced, thereby further increasing the total radial expansion that would be measured over the full range required by applicant's claim.

Furthermore, in the context of the Anderson disclosure, PET has no soft segments, so no manipulation of hard to soft segment ratio is available. Anderson also does not teach any block copolymer, or any other polymer material, that on its face would be expected to have a lower distensibility than PET. Consequently, a skilled person is clearly not able to produce a balloon having a radial expansion over the range of 4 atm to burst of about 3% or less from the teachings of Anderson, US 5,500,180. Moreover, the distensibility desired by Anderson is higher than that of PET, not lower. (Compare col. 6, lines 5-7 with col. 4, lines 10-14). Consequently Anderson provides no motivation to even try to decrease distensibility below that obtained with PET.

For the reasons just given, withdrawal of the rejection of claim 10 is requested.

Allowable Subject Matter - Objection to Format

Claims 4-8 and 11-16 have been indicated to be allowable, but objected to as dependent on a rejected claim. Claims 4 and 11 have been rewritten into independent form, including all of the limitations of the claims from which they previously depended. Accordingly, the objection to claims 4 and 11 has been removed. Claims 5-8 and 12-16 now depend from an allowable independent claim and so the basis for the objection to these claims has also been removed by the amendments of claims 4 and 11.

New Claims

New claim 17 is seen to be allowable as dependent on an allowable claim.

New claim 18 is seen to be allowable on the basis that, over the recited range of pressure over which the radial expansion is measured, the 3% maximum expansion is too low to have been taught or suggested in the prior art.

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Conclusion

In view of the foregoing amendments and remarks, the claims are now seen to be in condition for allowance. Withdrawal of the outstanding rejections and objections is respectfully requested.

Respectfully submitted,

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